

What is claimed is:

Claim 1. An improved food processing arrangement comprising, in combination:
a base unit having:
a rotation producing means;
a drive train operatively connected to said rotation producing means for transmitting rotary motion thereof *about a first axis*;
a mashing unit removably mountable on said base unit and having:
a frame member;
a roller having an outer surface and mounted on said frame member for rotation about a second axis;
a connection member coupled to said roller for operatively connecting said roller to said drive train for rotation of said roller about a second axis at a second predetermined rotational rate;
a scraper member having a first portion in food removing relationship to said roller for removing food from the outside surface of said roller;
a bowl movably and detachably mounted on said base unit and having:
an outside surface;
an inside surface defining a food receiving cavity and said inside surface in food mashing relationship to said roller for the condition of said roller rotating about said second axis;
said roller rotating said bowl about a third axis at a third predetermined rotational rate for the condition of said roller rotating about said second axis, whereby food in said food receiving cavity of said bowl is mashed between said outside surface of said roller and said inside surface of said bowl.

Claim 2. The arrangement defined in claim 1 and further comprising:
a mounting plate on said frame member of said mashing unit;

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3 said base unit having a rigid framework, and said rigid framework having first walls defining
4 slots therein, and said mounting plate of said mashing unit removably mountable in said slots; and,
5 key member removably mountable on said base unit and slidably engaging said rigid framework
6 of said base unit and said mounting plate of said mashing unit for detachably retaining said mashing unit
7 on said base unit.

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9 Claim 3. The arrangement defined in claim 2 and further comprising:
10 a detent on said mashing unit for removably restraining said key on said base unit .
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12 Claim 4. The arrangement defined in claim 1 wherein:
13 said outer surface of said roller has a first portion and a second portion;
14 said first portion of said outer surface of said roller having a first preselected curvature and said
15 first preselected curvature selected to provide substantially tangential contact of said first portion of
16 said roller with said inside surface of said bowl; and
17 said second portion of said outer surface of said roller having a geometric configuration other
18 than said first preselected curvature.

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20 Claim 5. The arrangement defined in claim 4 wherein:
21 said geometric configuration of said second portion of said outer surface of said roller is planar.
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23 Claim 6. The arrangement defined in claim 1 wherein:
24 said rotation producing means comprises a motor;
25 said base unit further comprising:
26 a rigid framework, and said motor mounted on said rigid framework;
27 a base plate;

a plurality of side roller bearings connected to said rigid framework in a predetermined spaced array and spaced from said base plate;

said bowl is rotatably supported on said base plate of said base unit and said outside surface of said bowl engaging said side roller bearings whereby said side roller bearings provide reaction to the forces generated by said roller mashing food against said inside surface of said bowl.

Claim 8. The arrangement defined in claim 1 wherein:
said scraper further comprises:

a second portion in food removing relationship to said inside surface of said bowl for removing food therefrom for the condition of said bowl rotating.

Claim 9. The arrangement defined in claim 1 wherein:
said drive train of said base unit further comprises:

a first gear connected to said drive shaft of said motor;

a second gear mounted in gear engaging relationship to said first gear and rotated thereby, and said second gear having a gear shaft and said gear shaft having a drive lug thereon;

said ~~connecting~~ ^{connection} member of said ^{roller of said} mashing unit comprising a clevis member for detachable coupling to said drive lug; and

said gear shaft of said second gear of said drive train rotating about said second axis.

Claim 10. The arrangement defined in claim 9 wherein:
said first axis is offset from said second axis and offset from said third axis.

Claim 11. The arrangement defined in claim 10 and further comprising:

a rigid bracing member extending between said first gear and said second gear for maintaining a predetermined spacing therebetween.

Claim ~~12~~¹¹. The arrangement defined in claim 1 wherein:

plurality of ball transfers mounted in said base plate; and,

said bowl mounted on said ball transfers for rotation thereon.

Claim ~~13~~¹². The arrangement defined in claim ~~12~~¹¹ wherein:

said rotation producing means comprises a motor;

said base unit further comprising:

a rigid framework, and ~~said~~ motor mounted on said rigid framework;

a base plate;

a plurality of side roller bearings connected to said rigid framework in a predetermined spaced array and spaced from said base plate;

said base rollers of said bowl rotatably support said bowl on said base plate of said base unit and said outside surface of said bowl engaging said side roller bearings whereby said side roller bearings provide reaction to the forces generated by said roller mashing food against said inside surface of said bowl.

Claim ~~14~~¹³. The arrangement defined in claim ~~13~~¹² wherein:

said scraper further comprises:

a second portion spaced from said first portion and said second portion in food removing relationship to said inside surface of said said bowl for removing food therefrom for the condition of said bowl rotating; and

said first portion and said second portion of said scraper positioned to scrape food into the

spacing therebetween.

Claim 15. The arrangement defined in claim 1 and further comprising:
a cover member for covering said bowl and said covering member removably mountable
on said base unit to cover said bowl.

Claim 16. An improved food processing arrangement comprising, in combination:
a mashing unit having:
a rotation producing means comprising:
a manually rotatable crank for rotation about a first axis;
a gear box operatively connected to said crank for transmitting rotary motion
thereof;

~~a mashing unit~~ having:
a pair of spaced apart rollers, a first of said pair of rollers operatively connected
to said gear box for rotation thereby about a second axis;
a scraper means having a first scraper member in food removing relationship to
said first of said pair of rollers for removing food from the outside surface of said first roller;
a base unit having:
a support surface;
a rigid framework extending upwardly from said support surface, and said mashing
unit mounted on said rigid framework;
a bowl movably and detachably mountable on said base unit between said first of said pair
of rollers and the second of said pair of rollers, and said bowl having:
an outside surface in tangential contact with said second of said pair of rollers;

an inside surface defining a food receiving cavity and said inside surface in tangential rotary motion transmitting contact with said first of said pair of rollers and in food mashing relationship to said first of said pair of rollers for the condition of said first of said pair of rollers rotating about said second axis;

said first of said pair of rollers rotating said bowl about a third axis at a predetermined rotational rate for the condition of said first of said pair of rollers rotating about said second axis, whereby food in said food receiving cavity of said bowl is mashed between said outside surface of said first of said pair of rollers and said inside surface of said bowl.

Claim ¹⁶~~17~~. The arrangement defined in claim ¹⁵~~16~~ wherein:

said outer surface of said first of said pair of rollers has a first portion and a second portion;

said first portion of said outer surface of said first of said pair of rollers having a first preselected curvature and said first preselected curvature selected to provide substantially tangential contact of said first portion of said first of said pair of rollers with said inside surface of said bowl; and

said second portion of said outer surface of said first of said pair of rollers having a geometric configuration other than said first preselected curvature.

Claim ¹⁷~~18~~. The arrangement defined in claim ¹⁶~~17~~ wherein:

said geometric configuration of said second portion of said outer surface of said first of said pair of rollers is planar.

Claim ¹⁸~~19~~. The arrangement defined in claim ¹⁵~~16~~ wherein:

said scraper further comprises:

a second scraper member in food removing relationship to said inside surface of said said

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bowl for removing food therefrom for the condition of said bowl rotating.

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Claim 20. ¹⁹The arrangement defined in claim ¹⁵ 16 wherein:

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said second of said pair of rollers rotates about an axis that is substantially parallel to said

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second axis and spaced therefrom.

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